

10/804866

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(FILE 'HOME' ENTERED AT 07:15:22 ON 01 SEP 2004)

FILE 'REGISTRY' ENTERED AT 07:15:27 ON 01 SEP 2004

L1 STRUCTURE UPLOADED
L2 STRUCTURE UPLOADED
L3 STRUCTURE UPLOADED
L4 STRUCTURE UPLOADED
L5 978 S L1 CSS FUL
L6 68 S L2 CSS FUL
L7 2 S L3 CSS FUL
L8 1 S L4 CSS FUL

FILE 'CAPLUS' ENTERED AT 07:17:28 ON 01 SEP 2004

=> s 15 and 16

1729 L5

1010 L6

L9 37 L5 AND L6

=> s 19 and 17

7 L7

L10 0 L9 AND L7

=> s 15 and 110

1729 L5

L11 0 L5 AND L10

=> s 15/p

L12 537 L5/P

=> s 112 and 16

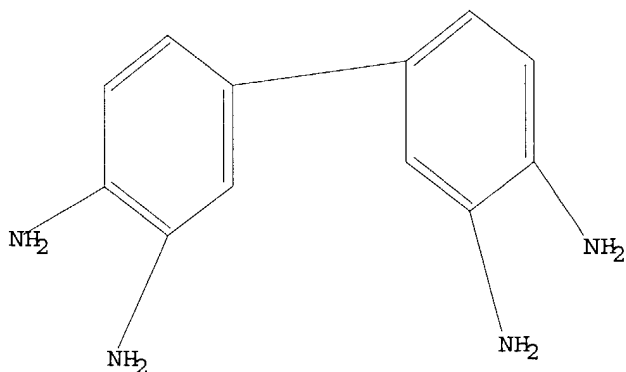
1010 L6

L13 9 L12 AND L6

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

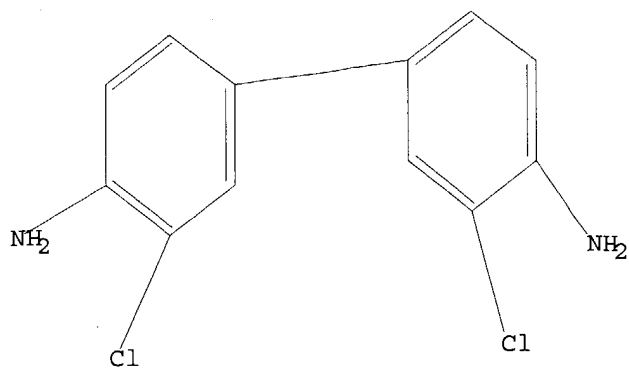
=> d 12

L2 HAS NO ANSWERS

10/804866

L2

STR



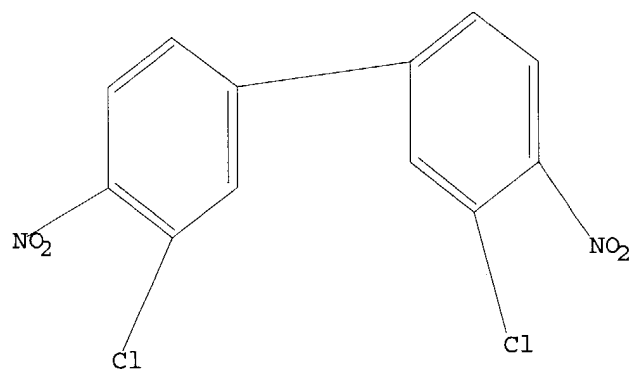
Structure attributes must be viewed using STN Express query preparation.

=> d 13

L3 HAS NO ANSWERS

L3

STR



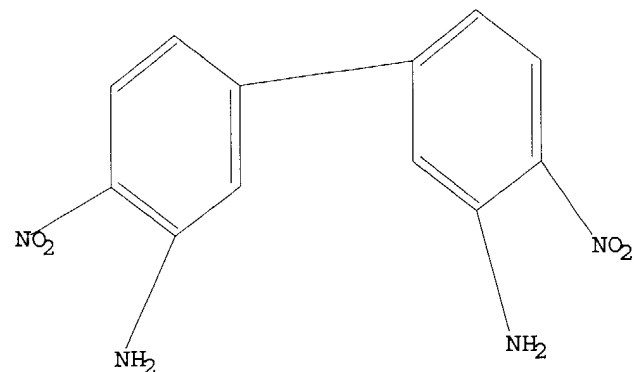
Structure attributes must be viewed using STN Express query preparation.

=> d 14

L4 HAS NO ANSWERS

L4

STR



10/804866

Structure attributes must be viewed using STN Express query preparation.

=> d bib abs hitstr 1-9

L13 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:470654 CAPLUS

DN 141:24122

TI Manufacture of high-purity 3,3'-diaminobenzidine with copper catalysts

IN Yamagami, Isao; Nozawa, Tsutomu

PA Showa Denko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

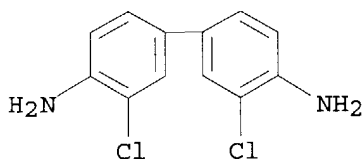
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004161643	A2	20040610	JP 2002-327803	20021112
PRAI	JP 2002-327803		20021112		
AB	3,3'-Diaminobenzidine (I), useful as material for heat-resistant polymers and fibers, is manufactured by amination of 3,3'-dichlorobenzidine (II) with NH ₃ in the presence of Cu catalysts, followed by treatment of the resulting crude I with divalent S compds. Thus, Dichlorodine-H (II.2HCl) was autoclaved with CuCl, Cu, NH ₄ Cl, and ammonia at 200° and 3.2 MPa for 18 h, heated with Na ₂ S at 120° for 1 h, mixed with water, adjusted to pH 2 with aqueous HCl, filtered, and the filtrate was adjusted to pH 11 to give 86% I containing ≤10 ppm Cu.				
IT	612-83-9 , 3,3'-Dichlorobenzidine dihydrochloride RL: RCT (Reactant); RACT (Reactant or reagent) (Dichlorodine H; removal of Cu catalysts by sulfides in manufacture of diaminobenzidine from dichlorobenzidine)				
RN	612-83-9 CAPLUS				
CN	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-, dihydrochloride (9CI) (CA INDEX NAME)				



●2 HCl

IT **91-95-2P**, 3,3'-Diaminobenzidine

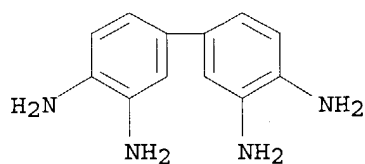
RL: IMF (Industrial manufacture); PUR (Purification or recovery); PREP (Preparation)

(removal of Cu catalysts by sulfides in manufacture of diaminobenzidine from dichlorobenzidine)

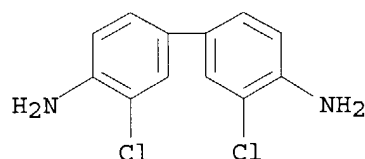
RN 91-95-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)

10/804866



IT **91-94-1**, 3,3'-Dichlorobenzidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(removal of Cu catalysts by sulfides in manufacture of diaminobenzidine from dichlorobenzidine)
RN 91-94-1 CAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)



L13 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:427821 CAPLUS

DN 119:27821

TI Process for the preparation of pure 3,3',4,4'-tetraaminobiphenyl from the ammonolysis of 3,3'-dichlorobenzidine in the presence of copper

IN Vorwerk, Edgar

PA Hoechst A.-G., Germany

SO Eur. Pat. Appl., 5 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 522577	A2	19930113	EP 1992-111765	19920710
	EP 522577	A3	19930512		
	EP 522577	B1	19951011		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	US 5235105	A	19930810	US 1992-910653	19920708
	CA 2073628	AA	19930113	CA 1992-2073628	19920710
	JP 06048998	A2	19940222	JP 1992-184143	19920710
	JP 2505687	B2	19960612		
PRAI	DE 1991-4123033		19910712		

OS CASREACT 119:27821

AB A process for the preparation of pure, high-quality 3,3',4,4'-tetraaminobiphenyl (TAB) in high yield from crude TAB [prepared by ammonolysis of 3,3'-dichlorobenzidine (I) in the presence of copper powder and CuCl followed by ammonia-water wash] involves treatment with 0-5 weight% active C and 1-2 weight% aqueous reducing agent at 100-140° under a protective atmospheric

In an example using Na2S2O4 as reducing agent at 110-120° with a N atmospheric, 60 kg I yielded 44.8 kg TAB (88.2% of theor.) of m.p. 176-178° with only 10 ppm Cu, vs. 0.2-2.0% Cu for crude TAB.

IT **91-94-1**

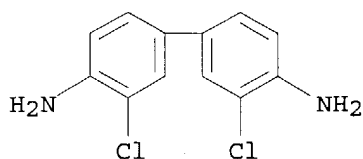
RL: RCT (Reactant); RACT (Reactant or reagent)

(ammonolysis of, in the presence of copper, tetraaminobiphenyl from)

RN 91-94-1 CAPLUS

10/804866

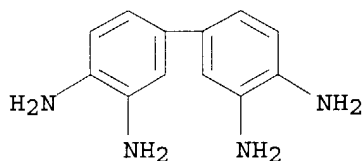
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)



IT 91-95-2P, [1,1'-Biphenyl]-3,3',4,4'-tetramine
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and purification of)

RN 91-95-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)



L13 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:109181 CAPLUS

DN 104:109181

TI Purification of 3,3',4,4'-biphenyltetramine

IN Toda, Minoru; Tao, Katsutoshi

PA Wakayama Seika Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

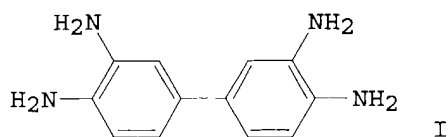
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60158146	A2	19850819	JP 1984-13800	19840127
PRAI	JP 1984-13800		19840127		

GI



AB Crude 3,3',4,4'-biphenyltetramine (I) obtained by treating 3,3'-dichloro-4,4'-diaminobiphenyl (II) in aqueous ammonia solution over Cu catalyst, was treated with an adsorbent in an aqueous reducing atmospheric to give

Cu-free I. Heat-resistant I is useful as raw material for resins and synthetic fibers. Thus, treating II, CuCl₂, Cu powder, and 25% NH₄OH with NH₃(l) in N₂ 7 h at 200° and washing with NH₄OH gave crude I containing

10/804866

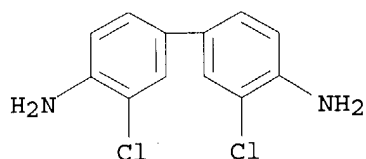
0.2% Cu, which was added to a heated ($\geq 95^\circ$) mixture of Taiko KW (activated C), aqueous FeCl_3 solution, and $\text{N}_2\text{H}_4 \cdot \text{H}_2\text{O}$, agitated 10 min, and crystallized to give 83.2% I containing ≥ 10 ppm Cu.

IT 91-94-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of)

RN 91-94-1 CAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)

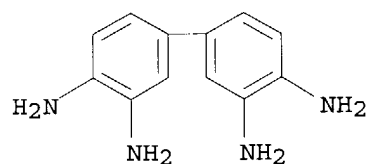


IT 91-95-2P

RL: PUR (Purification or recovery); PREP (Preparation)
(purification of, by removal of copper from, with hydrazine)

RN 91-95-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)



L13 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1983:71649 CAPLUS

DN 98:71649

TI Purification of crude 3,4,3',4'-tetraaminodiphenyl

IN Schubert, Hans; Baessler, Konrad

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

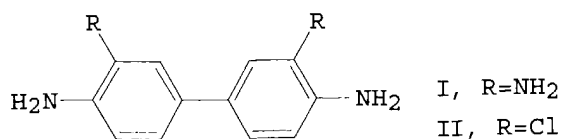
DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 3111470	A1	19820930	DE 1981-3111470	19810324
	DE 3111470	C2	19830317		
	EP 61168	A1	19820929	EP 1982-102258	19820319
	EP 61168	B1	19840530		
	R: BE, CH, DE, FR, GB, IT, NL				
	US 4433168	A	19840221	US 1982-360670	19820322
	JP 57171942	A2	19821022	JP 1982-44758	19820323
	JP 01052382	B4	19891108		
	CA 1195342	A1	19851015	CA 1982-399109	19820323
PRAI	DE 1981-3111470		19810324		
GI					

10/804866



AB Crude biphenyl I, prepared by ammonolysis of II using Cu catalysts, was purified by treating with aqueous NH₃ and, if necessary, treating the I so purified, with H₂O-soluble reducing agent in the presence of an adsorbent. Treating a mixture of II, Cu₂Cl₂, and Cu bronze or Cu powder with 25% aqueous

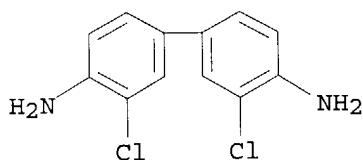
NH₃ in an autoclave, then with NH₃(l) and heating 7 h at 200°/55-50 bar gave crude I which was washed with 25% aqueous NH₃, then H₂O to give 96.5% I (based on crude I) containing .apprx.0.7% Cu. This partially purified I was then boiled with H₂O containing activated C and Na₂S₂O₄ 1-1.5 h to give purified I, 75.9% yield based on crude I, 71.3% based on II, with ≤0.005% Cu content.

IT 91-94-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(ammonolysis of)

RN 91-94-1 CAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)

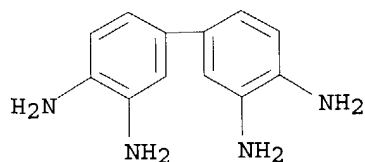


IT 91-95-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn and purification of)

RN 91-95-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)



L13 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1976:405351 CAPLUS

DN 85:5351

TI Synthesis of pure 3,3'-diaminobenzidine

IN Druin, Melvin L.; Oringer, Kenneth

PA Celanese Corp., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND

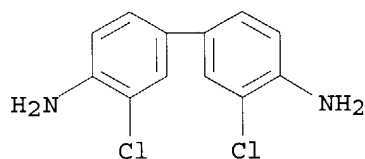
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APPLICATION NO.

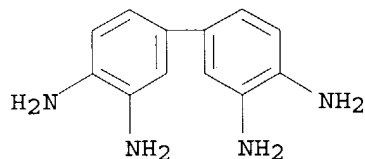
DATE

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PI US 3943175 A 19760309 US 1973-339910 19730309
PRAI US 1969-868198 19691021
AB 3,3'-Diaminobenzidine, prepared by catalytic aminolysis of
3,3'-dichlorobenzidine with Cu₂Cl₂, was purified by contact with H₂SO₄.
IT **91-94-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(ammonolysis of, catalysts for)
RN 91-94-1 CAPLUS
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)



IT **91-95-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and purification of, with sulfuric acid)
RN 91-95-2 CAPLUS
CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)

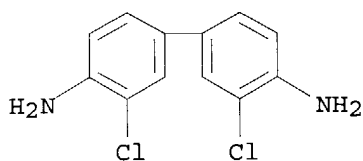


L13 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1975:155728 CAPLUS
DN 82:155728
TI Synthesis of 3,3'-diaminobenzidine from 3,3'-dichlorobenzidine
IN Chenevey, Edward C.; Druin, Melvin L.; Oringer, Kenneth
PA Celanese Corp.
SO U.S., 3 pp.
CODEN: USXXAM
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	US 3865876	A	19750211	US 1969-868200	19691021
PRAI	US 1969-868200		19691021		
AB	3,3'-Diaminobenzidine was prepared in 75.4-85.3% yield and 82.4-87.2% purity by the reaction of 3,3'-dichlorobenzidine with NH ₃ in 1:15-30 molar ratio at 225° and autogenous pressure in the presence of a CuCl catalyst.				
IT	91-94-1				
	RL: RCT (Reactant); RACT (Reactant or reagent) (amination of, catalysts for)				
RN	91-94-1 CAPLUS				
CN	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)				

10/804866

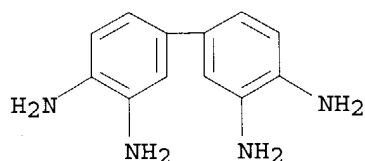


IT 91-95-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 91-95-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)



L13 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1974:520189 CAPLUS

DN 81:120189

TI 3,3'-Diaminobenzidine

IN Oofuji, Yoshio; Eguchi, Tamotsu; Imai, Kiyokazu

PA Kuraray Co., Ltd.

SO Jpn. Tokkyo Koho, 4 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 49011213	B4	19740315	JP 1970-44202	19700523
PRAI	JP 1970-44202		19700523		

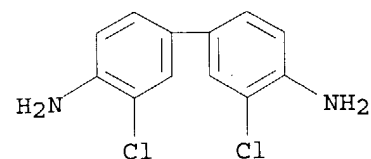
AB 3,3'-Diaminobenzidine was prepared by heating 3,3'-dichlorobenzidine (I) with aqueous NH₃ (≥ 6 mole NH₃/mole I) and Co oxide or a Cu salt (0.02-0.5 mole Cu/mole I) for ≥ 4 hr at $\geq 190^\circ$. Yields were 80-87%.

IT 91-94-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(ammonolysis of, catalysts for)

RN 91-94-1 CAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)



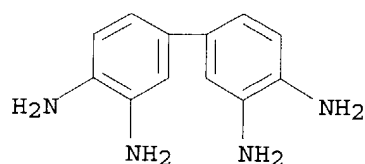
IT 91-95-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 91-95-2 CAPLUS

10/804866

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)



L13 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1974:520188 CAPLUS

DN 81:120188

TI 3,3'-Diaminobenzidine

IN Oofuji, Yoshio; Eguchi, Tamotsu

PA Kuraray Co., Ltd.

SO Jpn. Tokkyo Koho, 2 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 49011212	B4	19740315	JP 1970-44201	19700523
PRAI	JP 1970-44201		19700523		

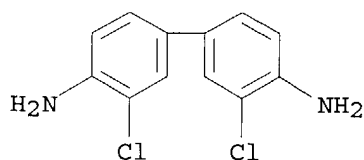
AB 3,3'-Diaminobenzidine (I) was prepared by heating 3,3'-dichlorobenzidine (II) with aqueous NH₃ (≥6 mole/mole II) and Cu (≥0.5 mole/-mole II) at ≥190° for ≥6 hr. Thus, II, 28% aqueous NH₃ and 50 mesh Cu powder were stirred 17 hr at 200-10° to give 70% I.

IT 91-94-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(ammonolysis of)

RN 91-94-1 CAPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (9CI) (CA INDEX NAME)

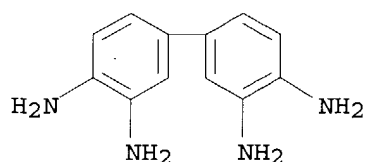


IT 91-95-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 91-95-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetramine (9CI) (CA INDEX NAME)



10/804866

L13 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1971:437017 CAPLUS
DN 75:37017
TI Aromatic polybenzimidazoles
IN Ohfuji, Yoshio
PA Kuraray Co., Ltd.
SO Ger. Offen., 31 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2047933	B2	19730620	DE 1970-2047933	19700929
	DE 2047933	C3	19740117		
	JP 48019239	B4	19730612	JP 1970-34585	19700421
	US 3686149	A	19720822	US 1970-79282	19701008
	GB 1284787	A	19720809	GB 1970-1284787	19701012
	FR 2064329	A5	19710723	FR 1970-37112	19701014
	FR 2064329	B1	19730112		
PRAI	JP 1969-82092		19691014		
	JP 1970-34585		19700421		

AB Thermally stable aromatic polybenzimidazoles were prepared by heating a mixture of an aromatic tetramine (having 2 ortho-amino groups), an aromatic dinitrile, and a triamino-halo- or diaminodihaloaromatic compound A mixture of 3,3'-diaminobenzidine 8.15, isophthalonitrile 5.12, and 3-amino-3'-chlorobenzidine (I) 0.47 g was heated at 330° in a closed container. The reaction mixture was cooled and the container was opened to give 12.25 g foamed poly(phenylene benzimidazole) resin which was stable up to 540°. Polymers prepared without I or with reduced amts. of I were brittle solids.

IT 31799-15-2P 32472-69-8P 32472-70-1P
32472-71-2P 32472-72-3P 32472-73-4P
32472-74-5P 32472-75-6P 32472-81-4P
32475-08-4P 32475-09-5P 32475-10-8P
32475-11-9P 32475-12-0P

RL: PREP (Preparation)
(preparation of)

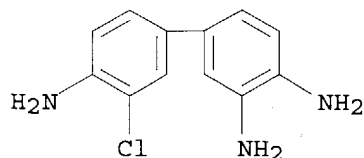
RN 31799-15-2 CAPLUS

CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and 3'-chloro-3,4,4'-biphenyltriamine (8CI) (CA INDEX NAME)

CM 1

CRN 46703-14-4

CMF C12 H12 Cl N3

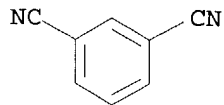


CM 2

CRN 626-17-5

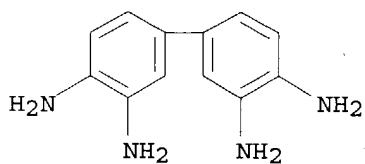
CMF C8 H4 N2

10/804866



CM 3

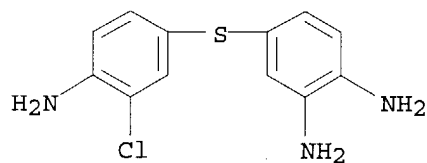
CRN 91-95-2
CMF C12 H14 N4



RN 32472-69-8 CAPLUS
CN Benzonitrile, 4,4'-methylenedi-, polymer with 3,3',4,4'-biphenyltetramine and 4-[(4-amino-3-chlorophenyl)thio]-o-phenylenediamine (8CI) (CA INDEX NAME)

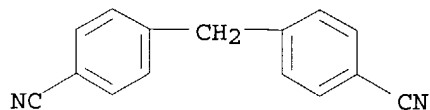
CM 1

CRN 46833-82-3
CMF C12 H12 Cl N3 S



CM 2

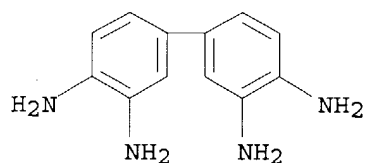
CRN 10466-37-2
CMF C15 H10 N2



CM 3

CRN 91-95-2
CMF C12 H14 N4

10/804866



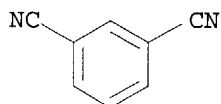
RN 32472-70-1 CAPLUS

CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and 3,3'-dichlorobenzidine (8CI) (CA INDEX NAME)

CM 1

CRN 626-17-5

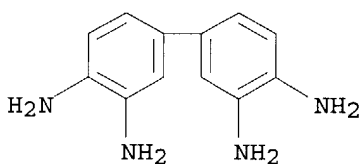
CMF C8 H4 N2



CM 2

CRN 91-95-2

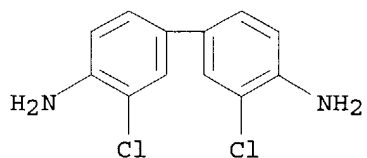
CMF C12 H14 N4



CM 3

CRN 91-94-1

CMF C12 H10 Cl₂ N₂



RN 32472-71-2 CAPLUS

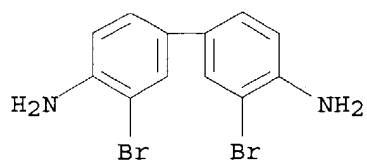
CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and 3,3'-dibromobenzidine (8CI) (CA INDEX NAME)

CM 1

CRN 34237-98-4

CMF C12 H10 Br₂ N₂

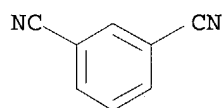
10/804866



CM 2

CRN 626-17-5

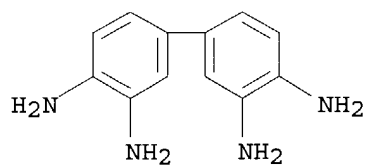
CMF C8 H4 N2



CM 3

CRN 91-95-2

CMF C12 H14 N4



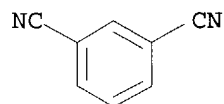
RN 32472-72-3 CAPLUS

CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and 4,4'-methylenebis[2-chloroaniline] (8CI) (CA INDEX NAME)

CM 1

CRN 626-17-5

CMF C8 H4 N2

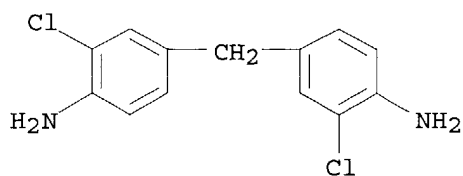


CM 2

CRN 101-14-4

CMF C13 H12 Cl2 N2

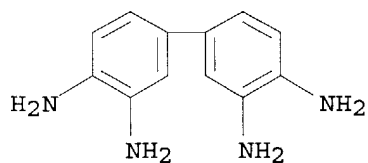
10/804866



CM 3

CRN 91-95-2

CMF C12 H14 N4



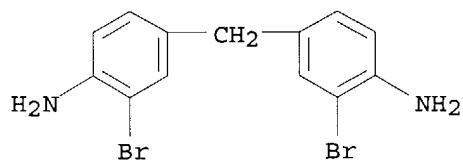
RN 32472-73-4 CAPLUS

CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and 4,4'-methylenebis[2-bromoaniline] (8CI) (CA INDEX NAME)

CM 1

CRN 5329-22-6

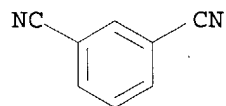
CMF C13 H12 Br2 N2



CM 2

CRN 626-17-5

CMF C8 H4 N2

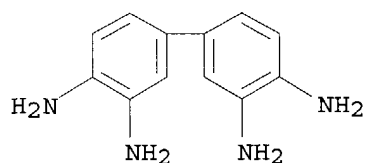


CM 3

CRN 91-95-2

CMF C12 H14 N4

10/804866



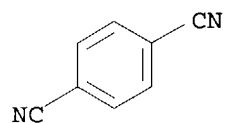
RN 32472-74-5 CAPLUS

CN Terephthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and 3,3'-dichlorobenzidine (8CI) (CA INDEX NAME)

CM 1

CRN 623-26-7

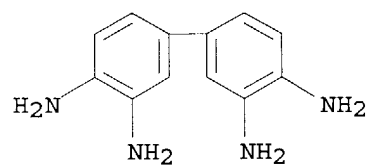
CMF C8 H4 N2



CM 2

CRN 91-95-2

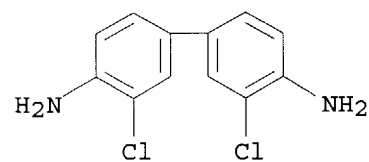
CMF C12 H14 N4



CM 3

CRN 91-94-1

CMF C12 H10 Cl2 N2



RN 32472-75-6 CAPLUS

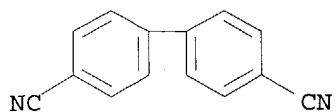
CN 4,4'-Biphenyldicarbonitrile, polymer with 3,3',4,4'-biphenyltetramine and 3,3'-dichlorobenzidine (8CI) (CA INDEX NAME)

CM 1

CRN 1591-30-6

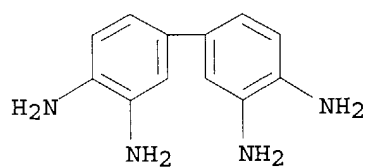
CMF C14 H8 N2

10/804866



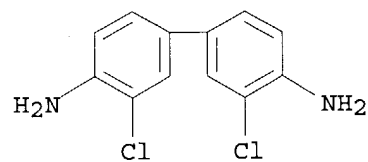
CM 2

CRN 91-95-2
CMF C12 H14 N4



CM 3

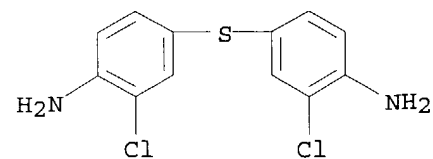
CRN 91-94-1
CMF C12 H10 Cl2 N2



RN 32472-81-4 CAPLUS
CN Benzonitrile, 4,4'-methylenedi-, polymer with 3,3',4,4'-biphenyltetramine and 4,4'-thiobis[2-chloroaniline] (8CI) (CA INDEX NAME)

CM 1

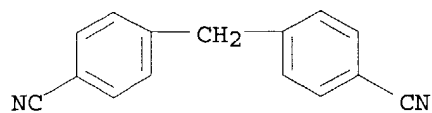
CRN 46833-81-2
CMF C12 H10 Cl2 N2 S



CM 2

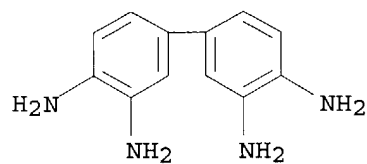
CRN 10466-37-2
CMF C15 H10 N2

10/804866



CM 3

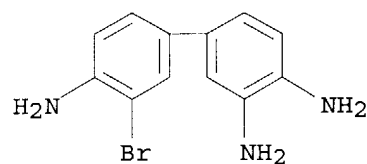
CRN 91-95-2
CMF C12 H14 N4



RN 32475-08-4 CAPLUS
CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and
3'-bromo-3,4,4'-biphenyltriamine (8CI) (CA INDEX NAME)

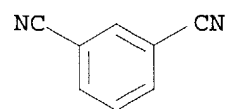
CM 1

CRN 46702-39-0
CMF C12 H12 Br N3



CM 2

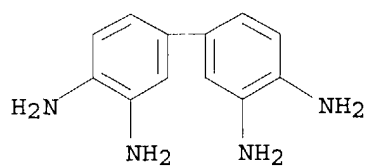
CRN 626-17-5
CMF C8 H4 N2



CM 3

CRN 91-95-2
CMF C12 H14 N4

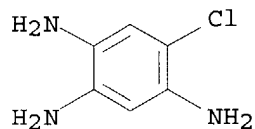
10/804866



RN 32475-09-5 CAPLUS
CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and
5-chloro-1,2,4-benzenetriamine (8CI) (CA INDEX NAME)

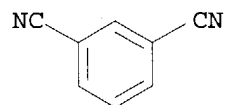
CM 1

CRN 38608-09-2
CMF C6 H8 Cl N3



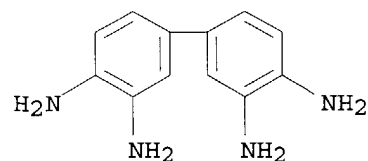
CM 2

CRN 626-17-5
CMF C8 H4 N2



CM 3

CRN 91-95-2
CMF C12 H14 N4

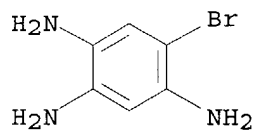


RN 32475-10-8 CAPLUS
CN Isophthalonitrile, polymer with 3,3',4,4'-biphenyltetramine and
5-bromo-1,2,4-benzenetriamine (8CI) (CA INDEX NAME)

CM 1

CRN 45772-63-2
CMF C6 H8 Br N3

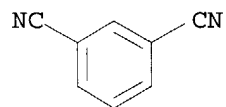
10/804866



CM 2

CRN 626-17-5

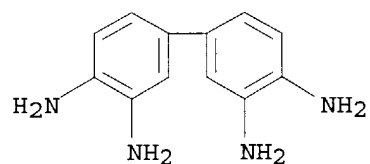
CMF C8 H4 N2



CM 3

CRN 91-95-2

CMF C12 H14 N4



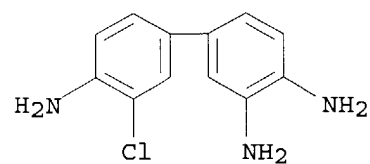
RN 32475-11-9 CAPLUS

CN 1,4-Benzenedicarbonitrile, polymer with [1,1'-biphenyl]-3,3',4,4'-tetramine and 3'-chloro[1,1'-biphenyl]-3,4,4'-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 46703-14-4

CMF C12 H12 Cl N3

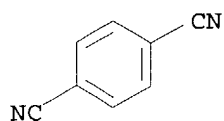


CM 2

CRN 623-26-7

CMF C8 H4 N2

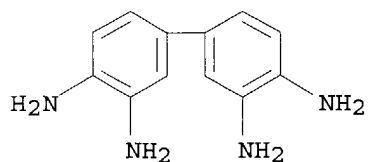
10/804866



CM 3

CRN 91-95-2

CMF C12 H14 N4



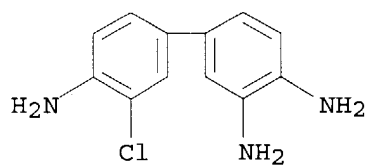
RN 32475-12-0 CAPLUS

CN 4,4'-Biphenyldicarbonitrile, polymer with 3,3',4,4'-biphenyltetramine and 3'-chloro-3,4,4'-biphenyltriamine (8CI) (CA INDEX NAME)

CM 1

CRN 46703-14-4

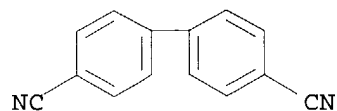
CMF C12 H12 Cl N3



CM 2

CRN 1591-30-6

CMF C14 H8 N2

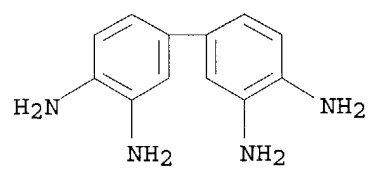


CM 3

CRN 91-95-2

CMF C12 H14 N4

10/804866



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